

# Multimedia Handbook

PSI<sup>®</sup>

multi media



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multi media

## **First Edition (July 1993)**

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| Kodak Photo CD   | Eastman Kodak Company |
| Microsoft        | Microsoft Corporation |
| Windows          | Microsoft Corporation |



## Welcome to the Exciting World of Multimedia!

Congratulations on your purchase of an IBM\* Personal System/1\* (PS/1) Multimedia Computer! The PS/1 multimedia computer brings the sights and sounds of multimedia to the PS/1 family of personal computers. Your PS/1 computer includes a compact disc-read only memory (CD-ROM) drive, sound card, speakers, and a rich collection of multimedia applications. These components provide you with an ideal platform from which to explore the exciting world of multimedia.

Here are some of the fun and exciting new things you can do with your multimedia computer:

- Use the CD-ROM drive to listen to your favorite music on audio compact disc while you work in another application.
- Use the CD-ROM to play entertainment programs that are designed to use video and synthesized sound.
- Use online reference materials that contain life-like animation, images, and video clips, such as an encyclopedia or atlas.
- Record and edit music or sound effects, and edit them for use with other programs.
- View and edit photographs (captured via the Kodak Photo CD\*\* process), and prepare them for online slide show displays.

In this guide, you will learn how to use the multimedia components of your computer, including the:

- CD-ROM Drive
- Sound Blaster 16\*\* Card
- Speakers

This guide also includes a troubleshooting section. Before you proceed, check the PS/1 *Start Here* to see that you have set up your computer correctly.





## Accessing Your Multimedia Software

Your PS/1 multimedia computer has several exciting multimedia software applications. Each application is represented by an icon in the Microsoft\*\* Windows\*\* group **PS/1 Multimedia**. You can run any one of these programs by double-clicking on its icon with your left mouse button. (See the **PS/1 Tutorial\*** for more information on running programs under Windows.)

**Compact Disc-Read Only Memory (CD-ROM):** Many multimedia programs, including some of those on your PS/1 computer, come with an accompanying CD-ROM disc.

### **Before starting any program that requires a CD-ROM disc...**

You must insert the disc in the CD-ROM drive and wait for the CD-ROM drive busy light to go off. If you try to run a program without the disc, you will get an error message from Windows or from the program itself.



## About Your CD-ROM Drive

The CD-ROM drive is an essential part of your PS/1 multimedia computer. With it you can run CD-ROM-based programs or listen to your favorite audio compact discs.

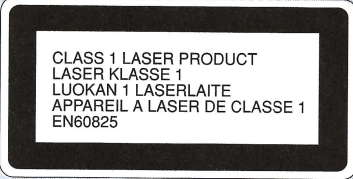
A CD-ROM disc is similar to an audio compact disc, which is used to store high-quality sounds in digital format. In addition to storing sounds, however, a CD-ROM disc can also store information, such as digitized images, programs, and text. CD-ROM discs are *read only*. You can read data from them, but you cannot add, erase, or modify that data.

Your PS/1 multimedia computer comes with a high-performance CD-ROM XA (XA means *extended architecture*.) drive that will spin discs at twice the speed of most other drives. Many software programs take advantage of this feature. For example, the CD-ROM drive is compatible with the Kodak Photo CD process. This allows you to display photographs on your PS/1 computer that have been transferred from 35 mm film to a photo CD-ROM disc.

The next few sections describe the CD-ROM drive and how to operate it.

### Note...

This label appears on your CD-ROM drive:

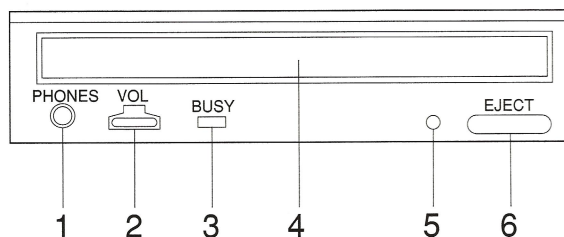


CLASS 1 LASER PRODUCT  
LASER KLASSE 1  
LUOKAN 1 LASERLAITE  
APPAREIL A LASER DE CLASSE 1  
EN60825

## CD-ROM Drive Controls

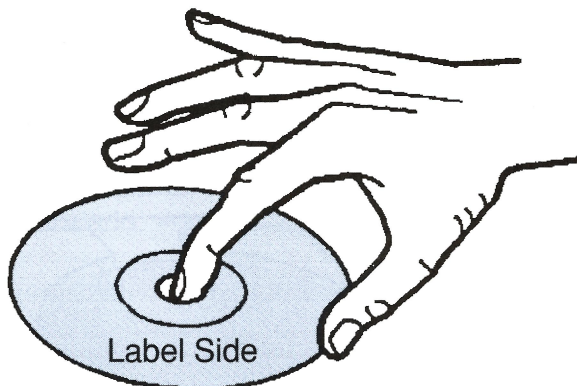
The following picture illustrates the front view of the CD-ROM drive. The parts, controls and their functions are described below:

- 1. Headphone Jack** Allows you to connect headphones into a 3.5 mm stereo mini plug.
- 2. Volume Control** Allows you to adjust only the volume level for headphones plugged into the CD-ROM drive.
- 3. Busy Light** Turns on when data is read from the disc or when the drive is playing an audio CD.
- 4. Loading Tray** Holds a standard 120 mm or a single play 80 mm compact disc.
- 5. Manual Eject Hole** Allows access to a manual eject mechanism (see "Removing Discs" on page 7).
- 6. Eject Button** Opens and closes the loading tray.



## Disc Handling and Care

CD-ROM discs look like audio compact discs, and they should be handled in the same manner. To pick up a CD-ROM disc, grasp the inner and outer edges of the disc. Avoid touching the recorded side (the side of the disc without a label); doing so could scratch or damage the disc.



When a disc is not in its protective case or in the drive, be sure to protect it from dust, ink, or any other materials that may damage the surface of the disc. If your disc is dusty, wipe it gently with a clean, dry cloth before inserting the disc into the drive.

If the recorded side becomes contaminated with dirt or fingerprints, purchase a CD cleaning kit. Follow the kit instructions for cleaning the disc.

### **Note...**

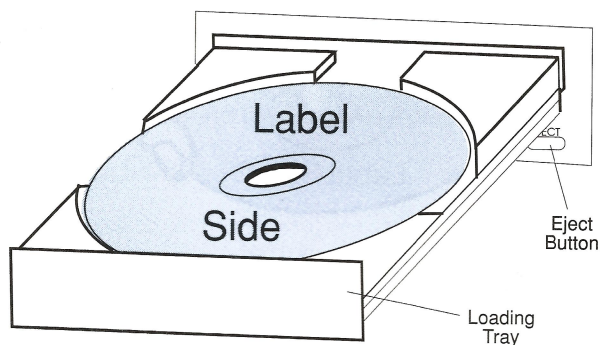
Compact discs can be affected by heat: do not use or store a disc at a temperature above 55°C (131°F).



## Installing Discs

To insert a disc into your CD-ROM drive:

1. Make sure that your PS/1 computer is turned on.
2. Press the **Eject** button on the front of the CD-ROM drive. The loading tray will automatically open.
3. Place the disc flat in the center of the circular recess of the loading tray. Make sure that the label is facing up.
4. Close the tray by pressing the **Eject** button or by gently pushing in on the front of the tray until it begins to retract on its own.



When the tray is back in the drive, the disc will start spinning, and the **Busy** light will come on. After the CD-ROM drive initializes itself, the light will go off, and the drive will be ready to access the information on the disc.



## Removing Discs

To remove a disc from your CD-ROM drive:

1. Press the **Eject** button on the front of the drive.
2. When the loading tray is fully extended, carefully remove the disc and return it to its protective case.
3. To close the tray, press the **Eject** button or gently push in on the front of the tray until it begins to retract itself.

Your PS/1 CD-ROM drive supports a feature called *software eject*. *Software Eject* allows you to use multimedia applications to automatically eject and retract the loading tray.

**Manual Eject:** If the tray fails to open when the **Eject** button is pressed, it is possible to open the tray manually and remove a CD from the CD-ROM drive. This procedure should *only* be used if the tray will not open due to an electrical power failure or other malfunction.

To manually open the tray, use a tool such as the end of a large, straightened paper clip 2 inches (50 mm) or more in length. Follow these steps to open the tray manually:

1. Insert the tool into the manual eject hole (located to the left of the **Eject** button). You will feel the tool stop against the eject mechanism.
2. Push the eject mechanism with the tool. The tray will partially open.
3. Grasp the end of the tray, and pull firmly until the tray is completely open.
4. Remove the CD and close the tray manually.



## About Your Sound Card and Speakers

Another important part of the PS/1 multimedia computer is the sound card. Many popular personal computer programs use the sound card to generate sound effects and music. Your sound card, the Sound Blaster 16, works with your CD-ROM drive to play audio compact discs and to process audio data files, such as Musical Instrument Digital Interface (MIDI) files and *waveform* files. (*Waveform* is a digital method of storing and changing audio data.)

Your PS/1 multimedia computer also comes with a set of external speakers specially designed to use with multimedia computers.

## Sound Card Controls and Connections

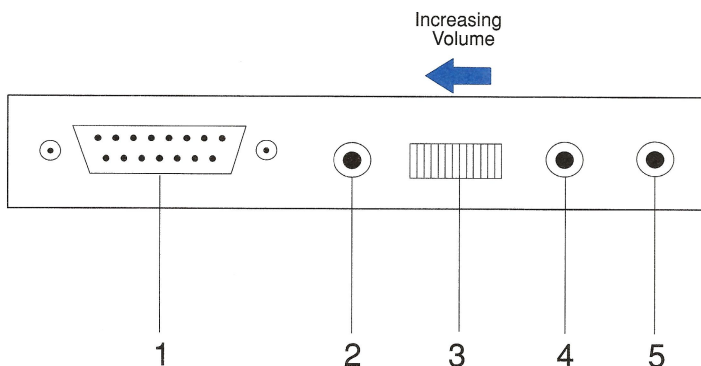
Your sound card is already installed and properly configured in your PS/1 computer. The PS/1 *Start Here* describes how to connect the speakers to the sound card on the back of your computer. The rest of the connections and controls on your sound card are shown in the picture below.

1. **MIDI/Game Port** Allows you to connect a MIDI device or joystick.
2. **Audio Output Jack** Allows you to connect your external speakers, stereo amplifier, or headphones.
3. **Volume Control** Allows you to adjust volume level of speakers and headphones connected to the sound card.

### Note...

Many multimedia programs also provide a volume control within the program. To set the actual volume of your system, use the volume control on your sound card **and** the volume controls on your software and speakers.

4. **Microphone Jack** Allows you to connect an external microphone.
5. **Line In Jack** Allows you to connect an audio input line from your stereo.



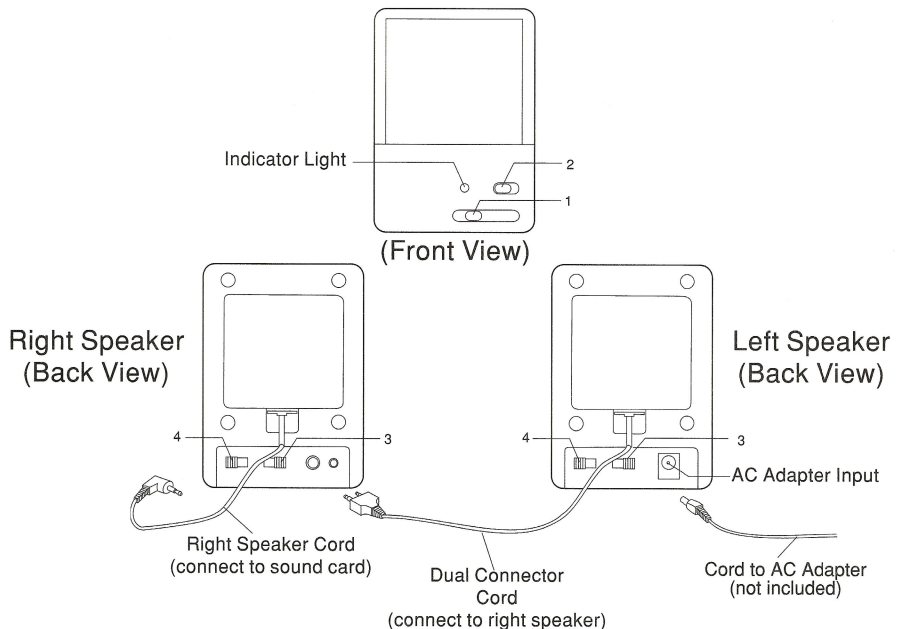
## Speaker Controls

Your speakers are shipped in a non-amplified mode. In order for your speakers to work properly in this mode, set the On/Off switches on both speakers to the *Off* position.

To amplify the sound from your speakers, you can purchase either 4 size C batteries (1.5 volts) **or** an *alternating current* (ac) adapter that generates 6 volts of *direct current* (dc) and is built with the center pin as – (negative). To use the speakers in an amplified mode, set the On/Off switches on both speakers to the *On* position. The controls on the speakers will only become active when you use batteries or an adapter.

The following picture shows the speakers that come with your PS/1 multi-media computer. The controls on your speakers may look slightly different.

- |                               |   |
|-------------------------------|---|
| <b>1. Volume (Front)</b>      | Allows you to adjust the volume level.              |
| <b>2. Bass Boost (Front)</b>  | Allows you to amplify lower tones.                  |
| <b>3. Treble Boost (Rear)</b> | Allows you to amplify higher tones.                 |
| <b>4. On/Off (Rear)</b>       | Allows you to turn the speaker amplifier on or off. |







## Troubleshooting Tips

If you have problems with your PS/1 multimedia computer, the following table should be used along with the troubleshooting table in *Getting to Know Your PS/1 Computer*:

Table 1 (Page 1 of 2). Multimedia Component Troubleshooting

| If the problem is...                      | Here's what to do...  |
|---|---|
| Windows "Drive Not Ready" message appears | <ul style="list-style-type: none"><li>• Make sure the CD is properly loaded in the CD-ROM drive. Wait for the <b>Busy</b> light to go out, and then try again.</li><li>• Click on the <b>Retry</b> button in the Windows box.</li><li>• Remove and inspect the disc, cleaning if necessary.</li></ul>   |
| CD-ROM disc does not play                 | Check that the CD is "label-side" up in the tray.   |
| No sound comes out of speakers            | <ul style="list-style-type: none"><li>• Check that all speaker connections are correct.</li><li>• Check that the sound card volume control is set to maximum.</li><li>• If speakers are not amplified, check that the Amplifier On/Off switch on each speaker is set to <i>Off</i>.</li><li>• If speakers are amplified, check if speaker volume control is set to maximum, if the batteries are good, or if the AC adapter is connected correctly.</li><li>• Check the volume settings in the application you are running (if available).</li><li>• Check the volume settings in the sound card mixer application, if in use.</li><li>• If the error continues, check your warranty for service information.</li></ul> |

*Table 1 (Page 2 of 2). Multimedia Component Troubleshooting*

| <b>If the problem is...</b>                     | <b>Here's what to do...</b>   |
|---|---|
| CD-ROM drive "skips" or plays music erratically | <ul style="list-style-type: none"><li>• Remove and inspect the disc, cleaning if necessary.</li><li>• Check to see if there is something causing the computer to vibrate which may lead to "skipping" of data.</li><li>• If the error continues, check your warranty for service information.</li></ul>   |
| No sound comes out of headphones                | <ul style="list-style-type: none"><li>• Check that the headphone connection is correct.<br/>For an audio CD, use the headphone jack on the CD-ROM drive. For multimedia applications, use the audio output jack on the sound card.</li><li>• Check that the sound card volume control is set to maximum.</li><li>• Check the volume settings in the application you are running (if available).</li><li>• Check the volume settings in the sound card mixer application, if in use.</li></ul> |









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